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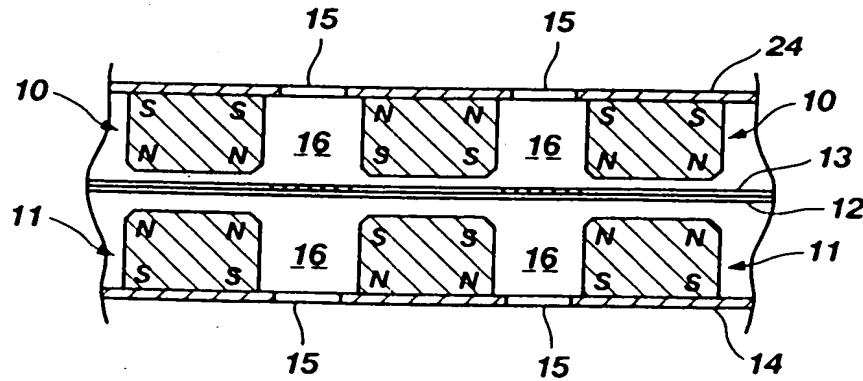


Fig. 1
(PRIOR ART)

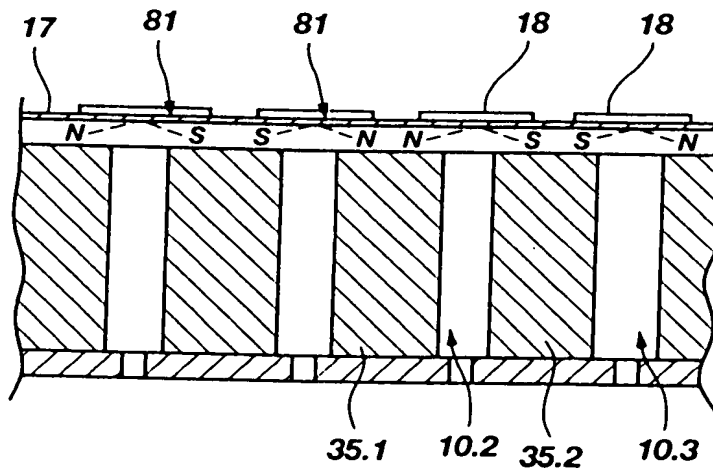


Fig. 2
(PRIOR ART)



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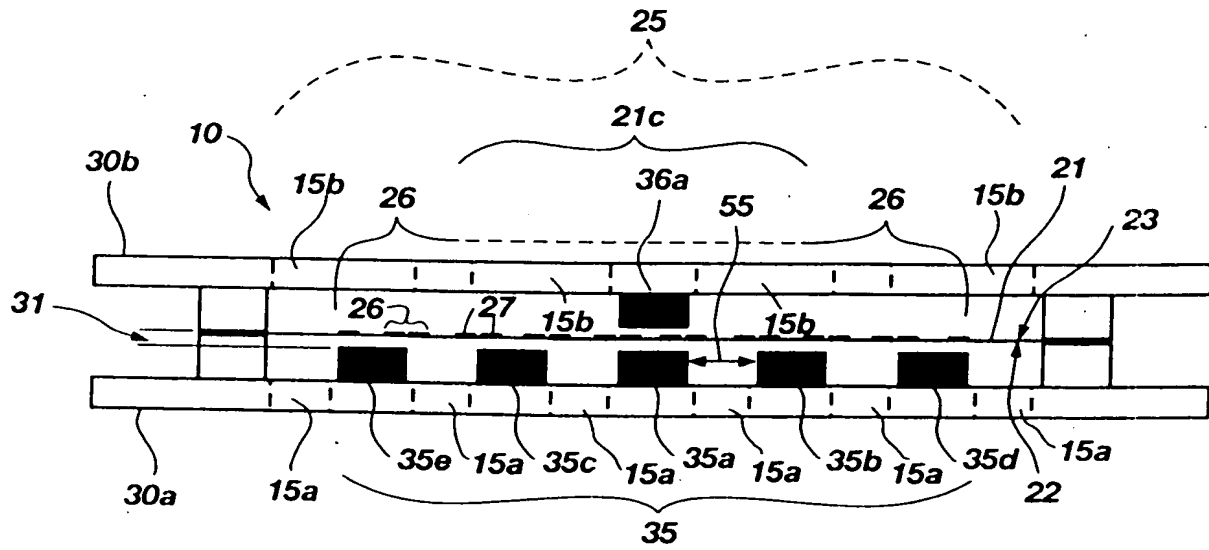


Fig. 3

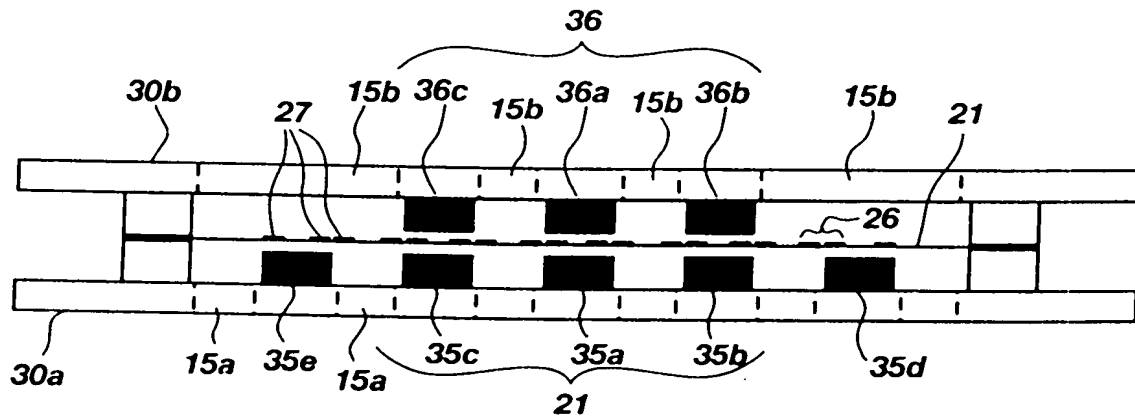


Fig. 4A

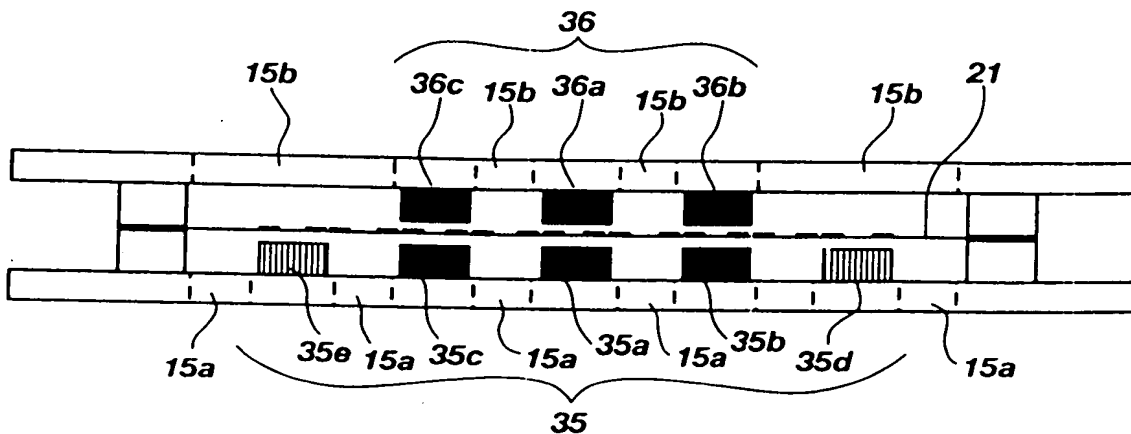


Fig. 4B



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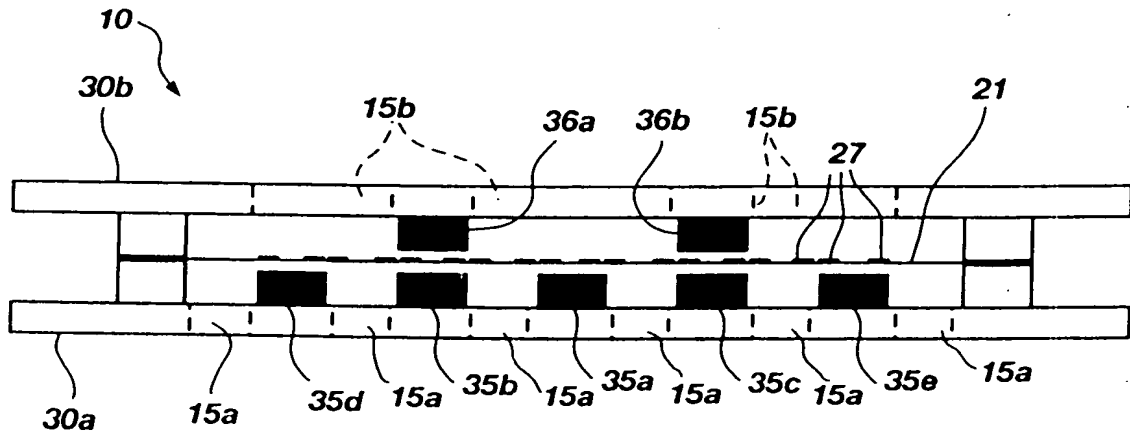


Fig. 4C

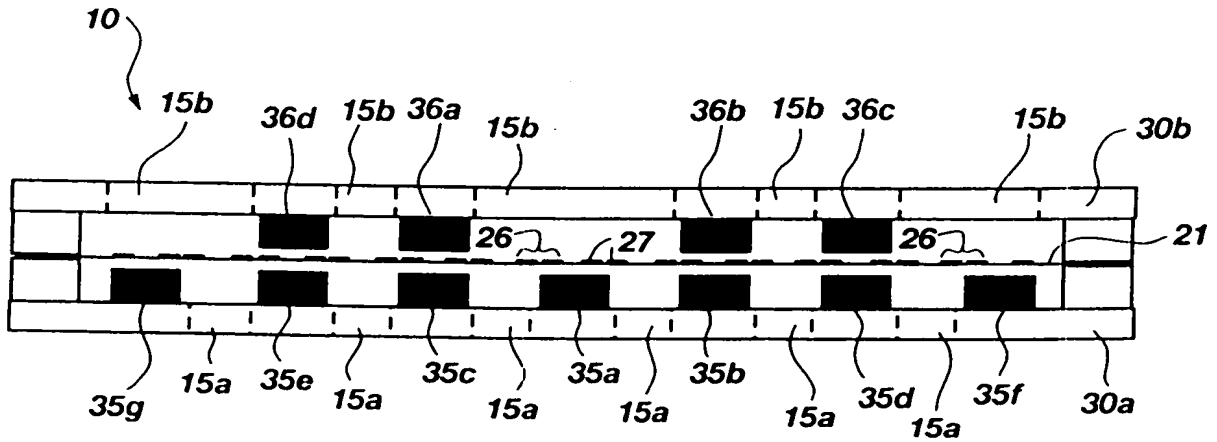


Fig. 4D

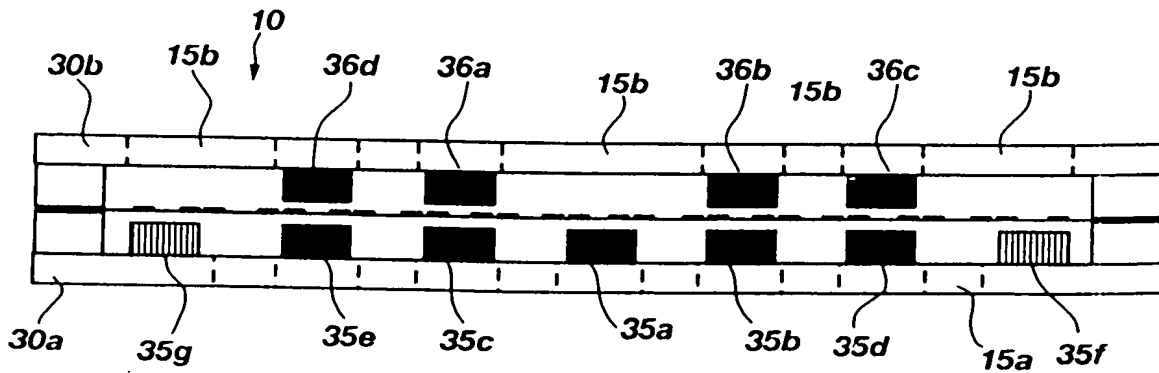


Fig. 4E



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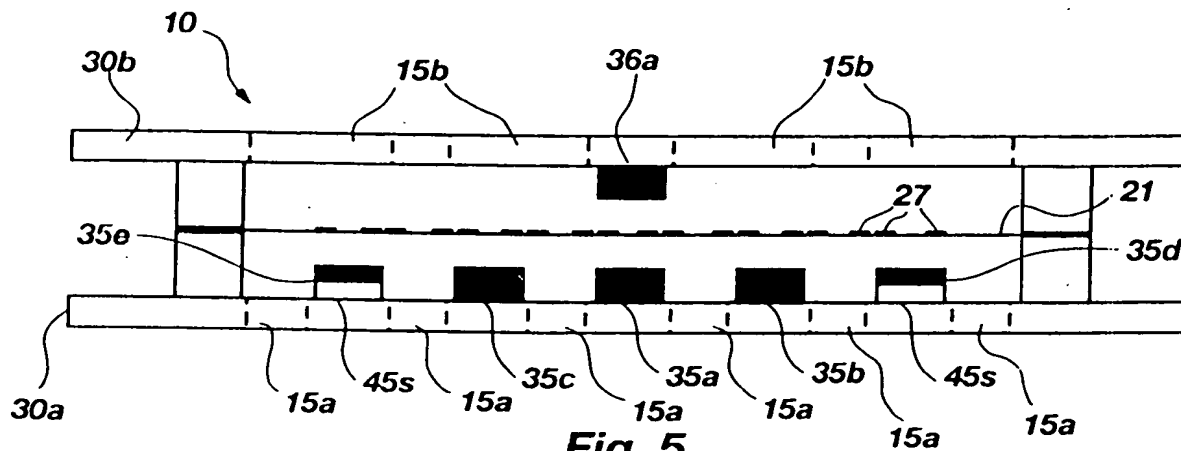


Fig. 5

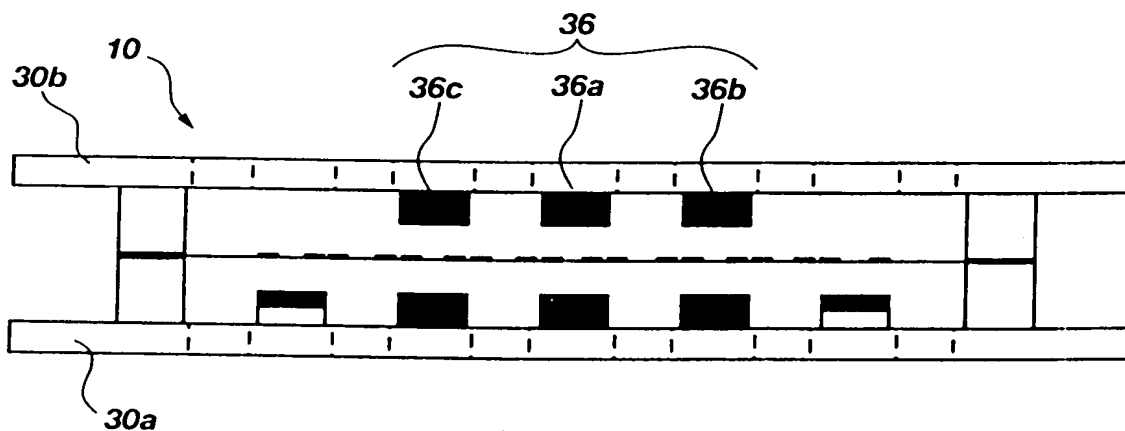


Fig. 6

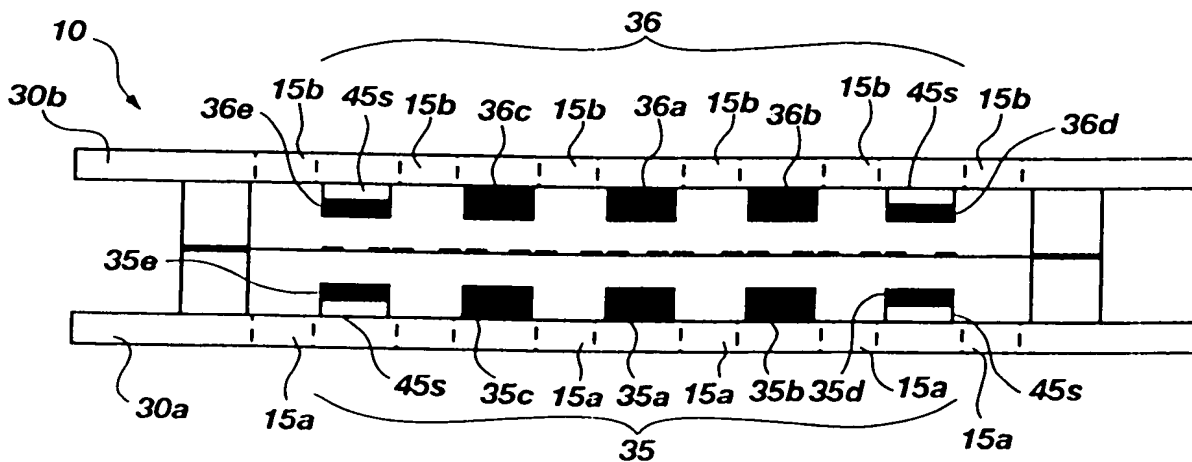


Fig. 7

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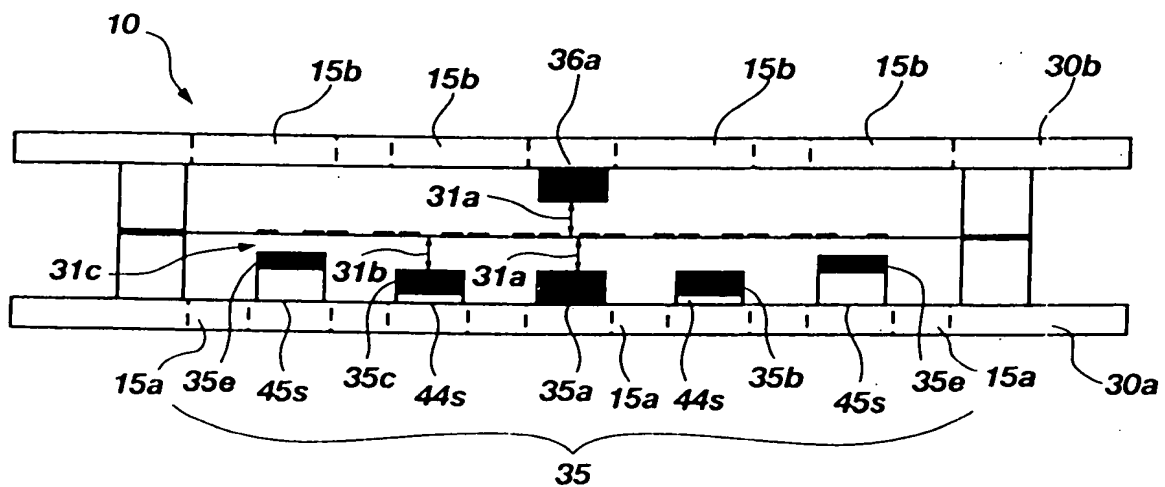


Fig. 8

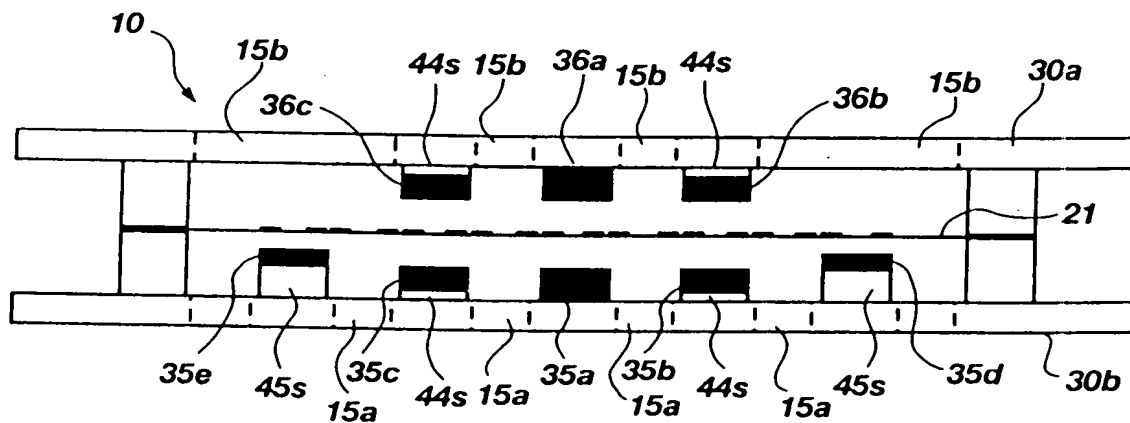


Fig. 9

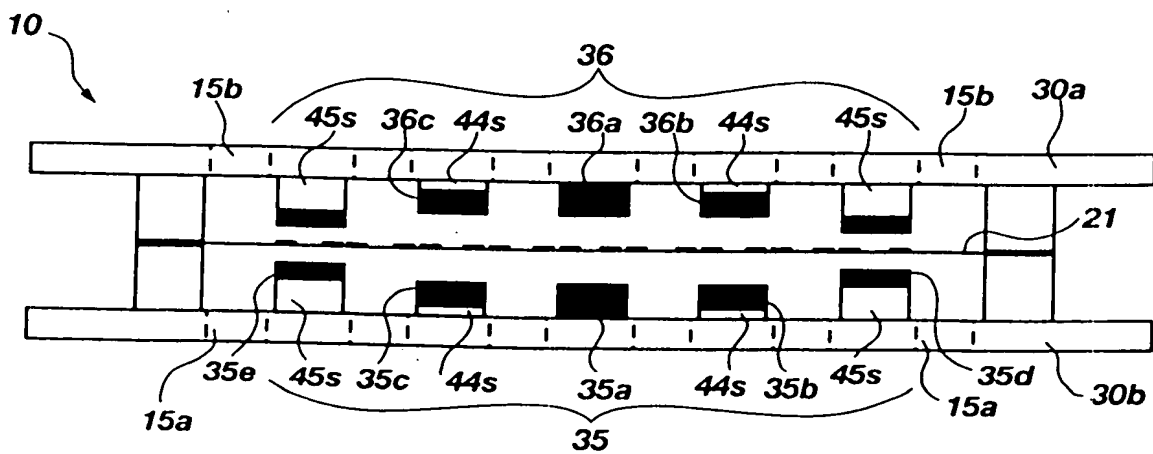


Fig. 10

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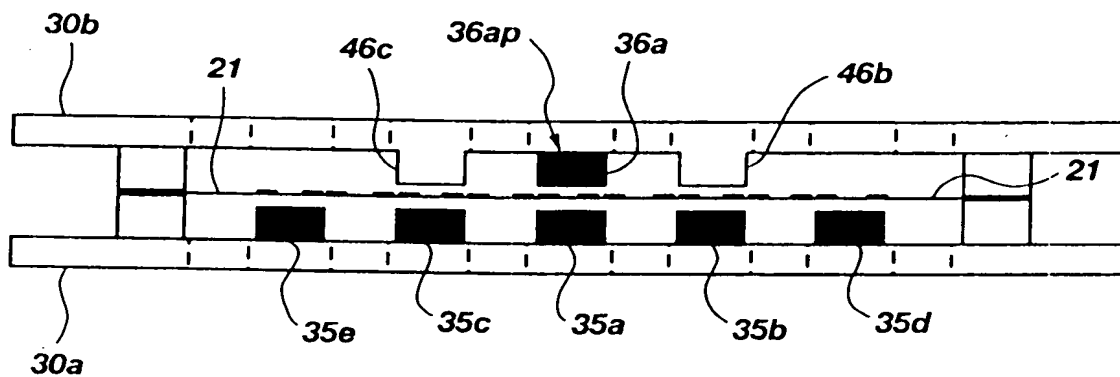


Fig. 11

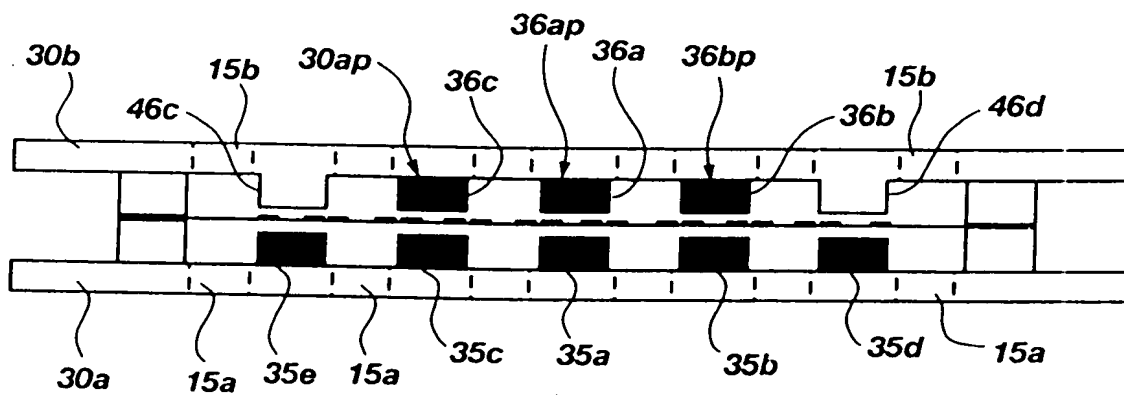


Fig. 12



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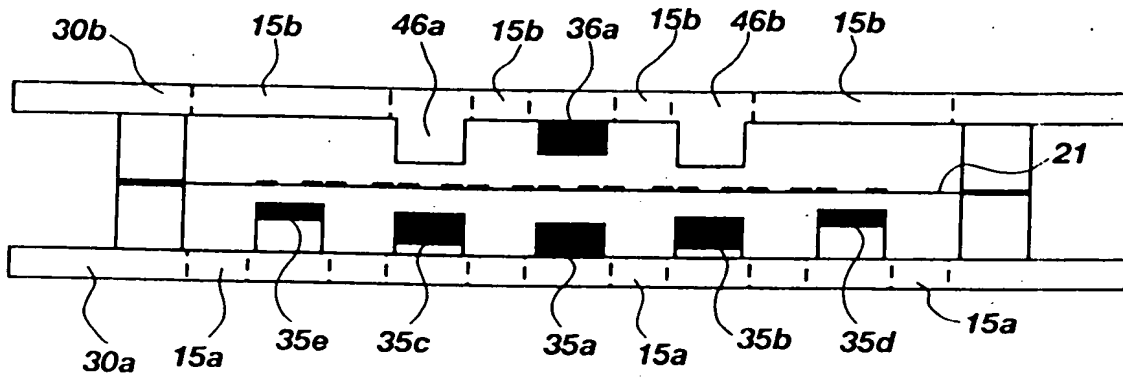


Fig. 13

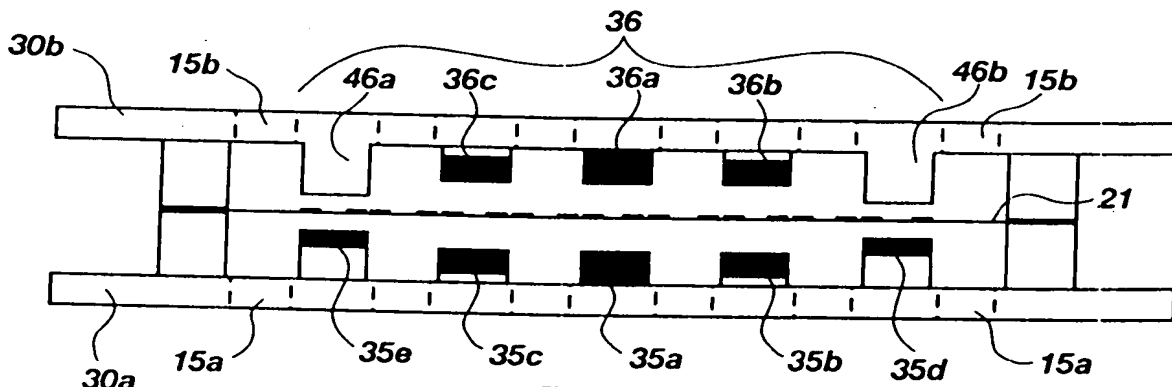


Fig. 14

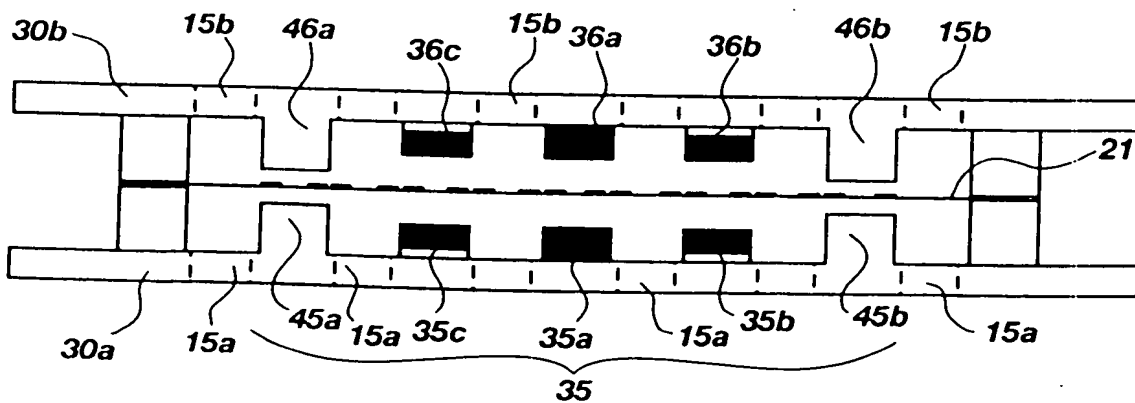
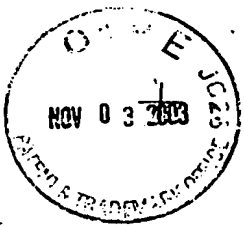


Fig. 15

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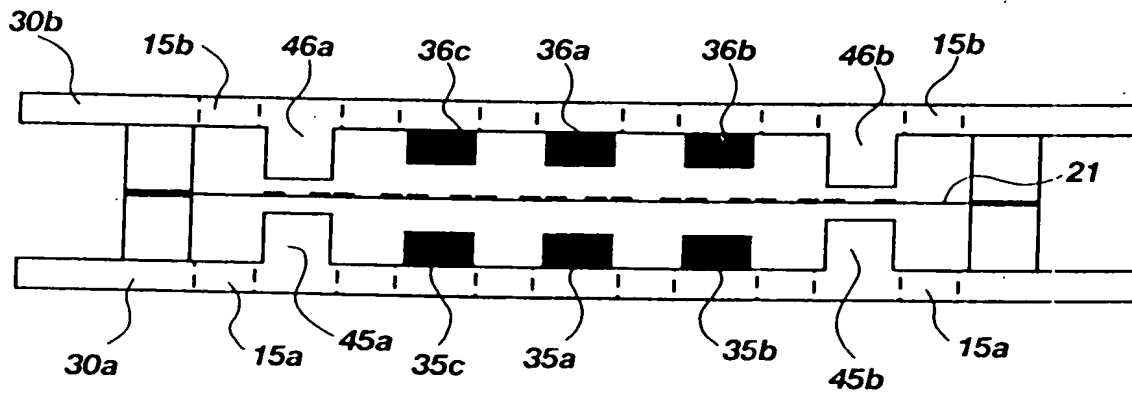


Fig. 16

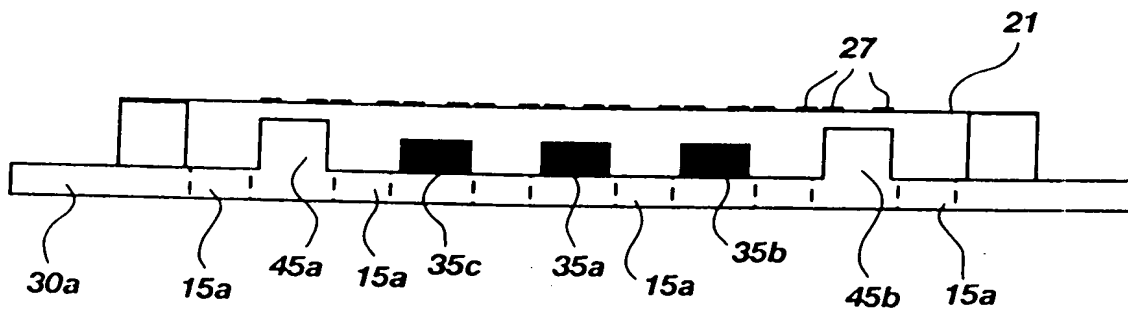


Fig. 17



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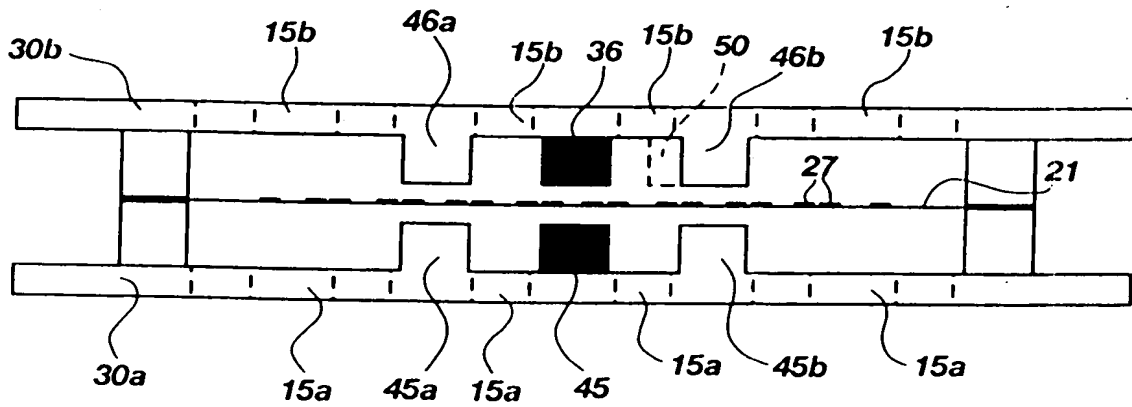


Fig. 18

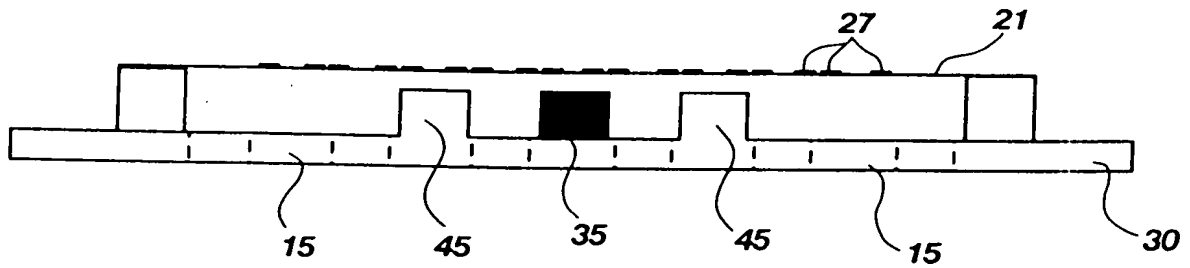


Fig. 19

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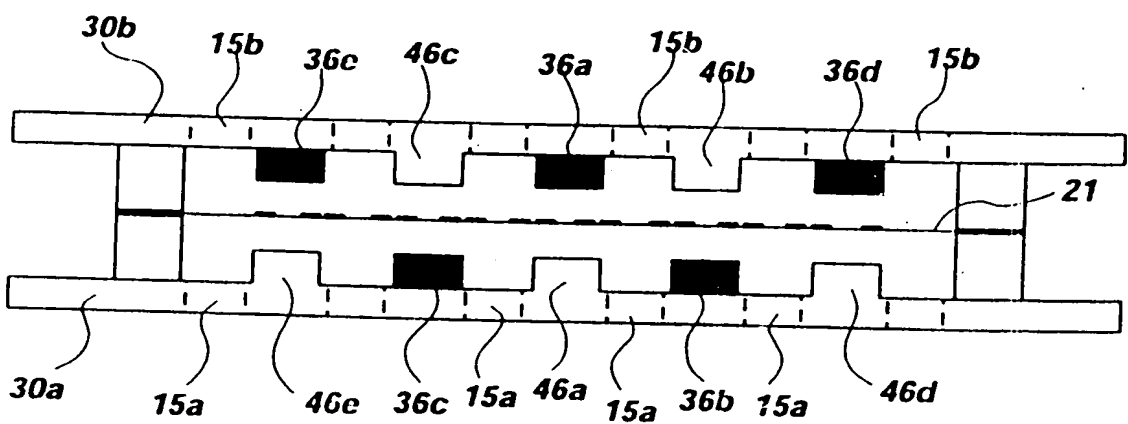


Fig. 20

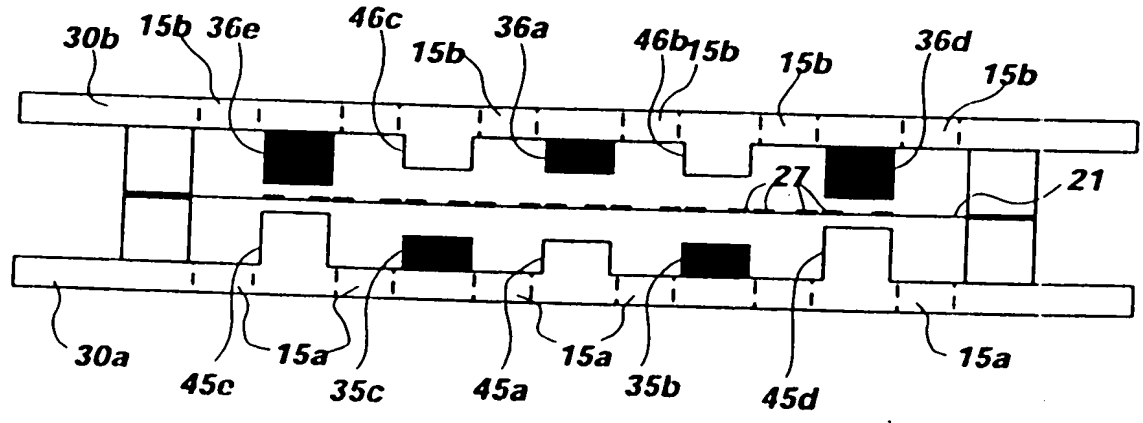


Fig. 21

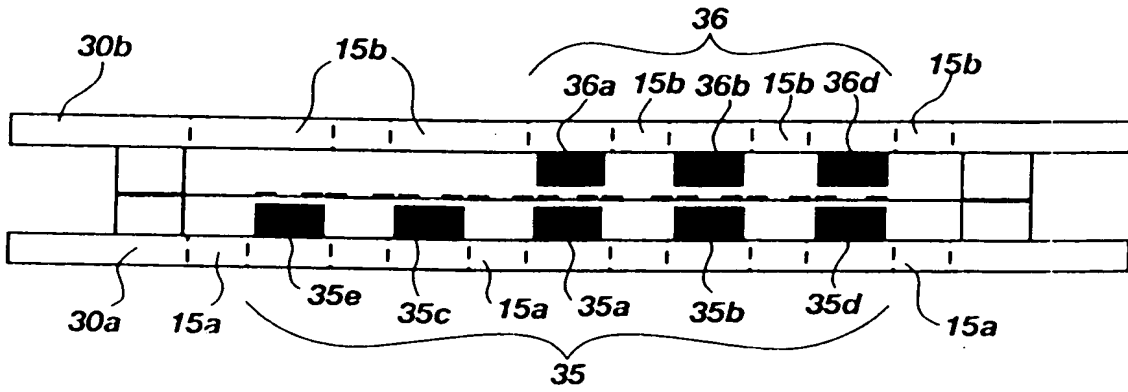


Fig. 22



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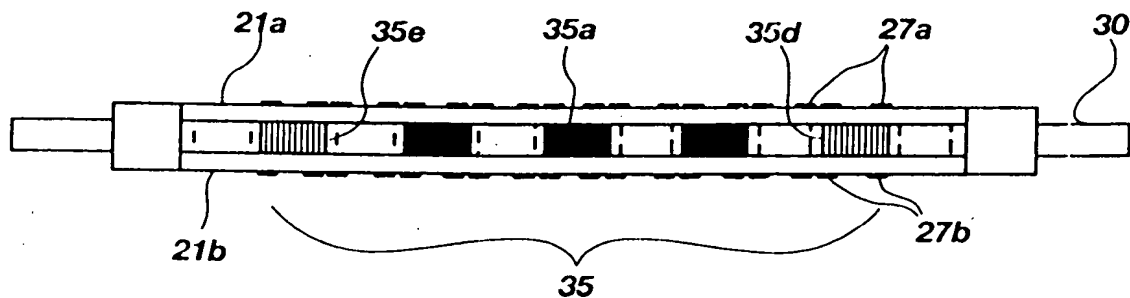


Fig. 23

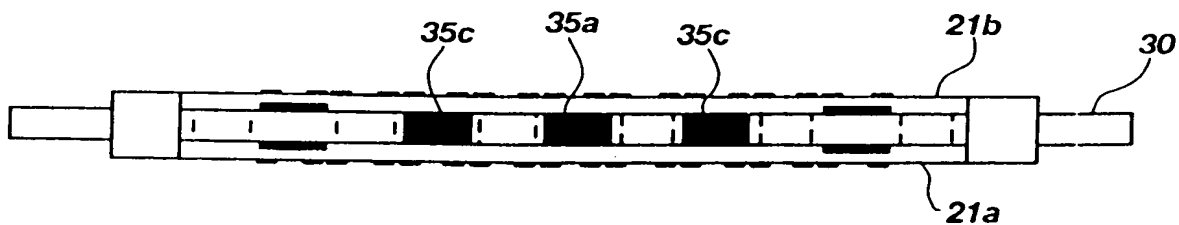


Fig. 24

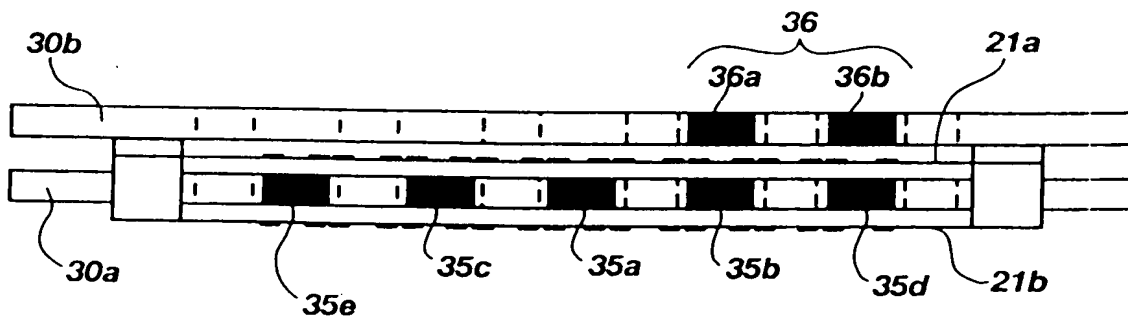


Fig. 25

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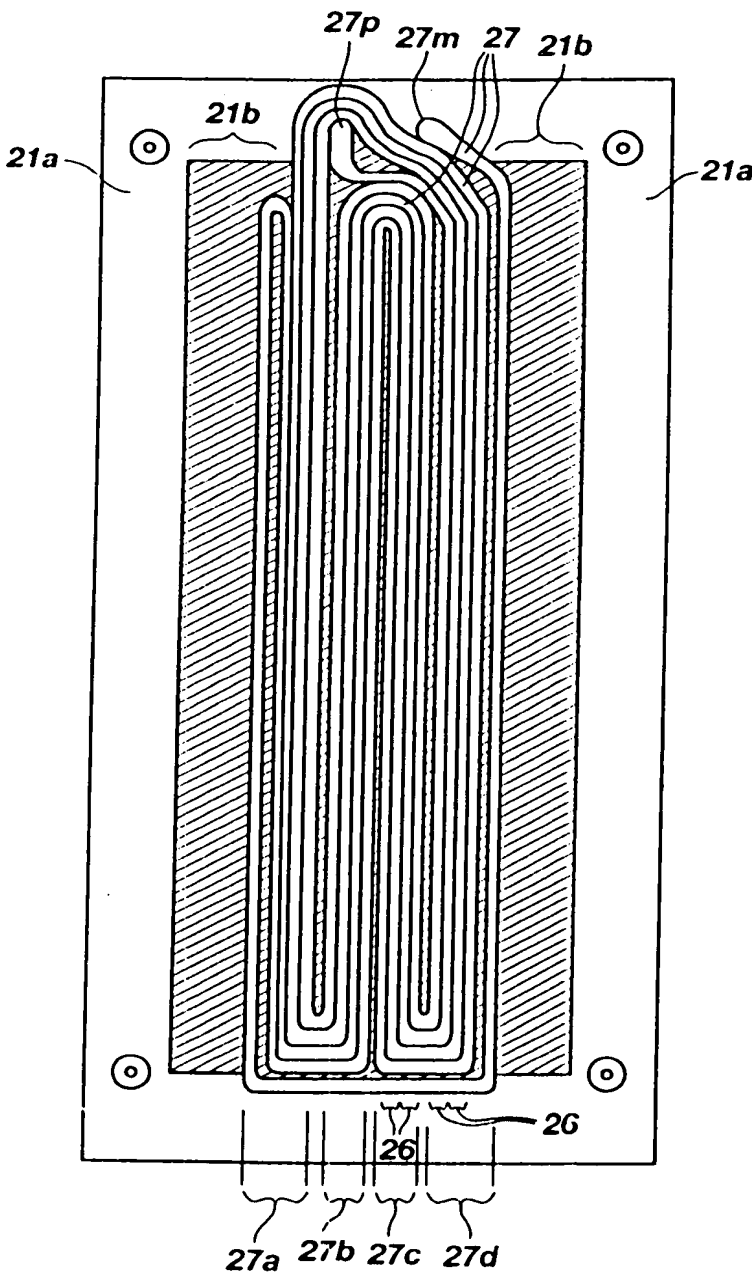


Fig. 26

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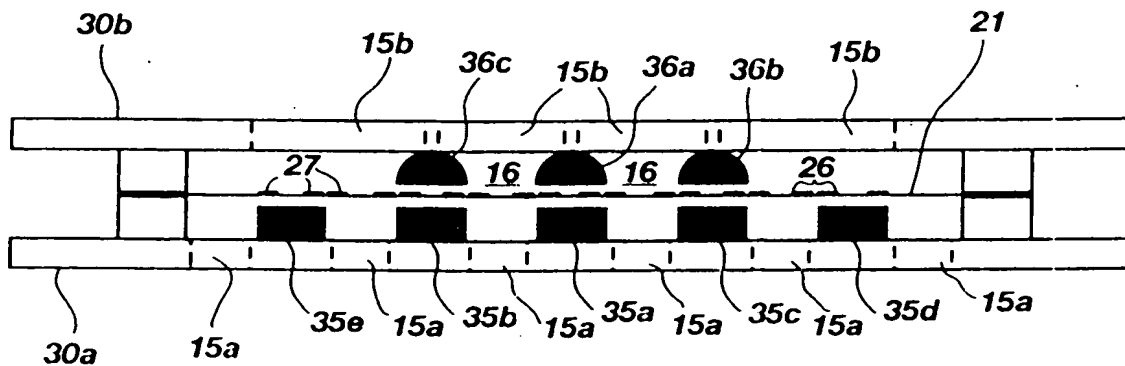


Fig. 27

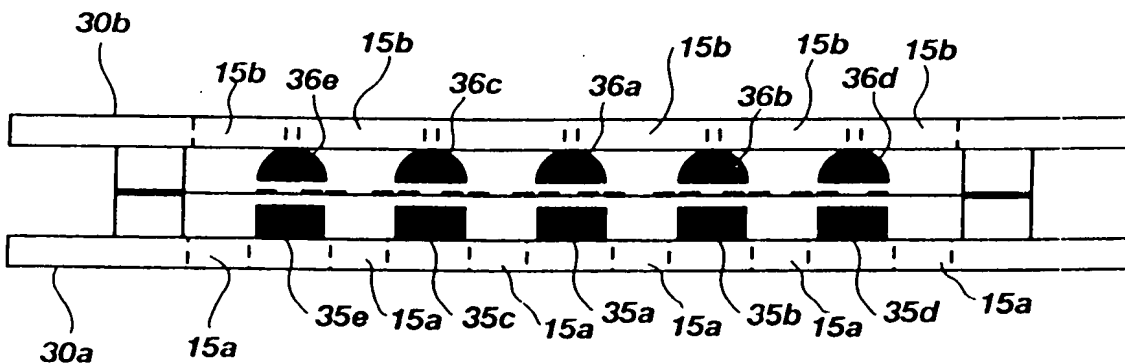
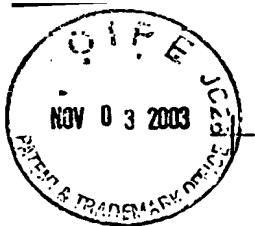


Fig. 28



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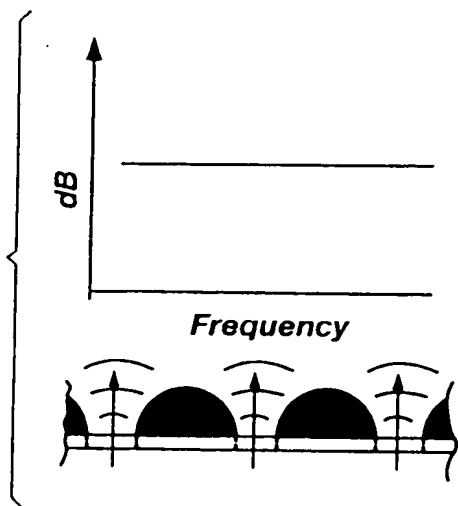


Fig. 30

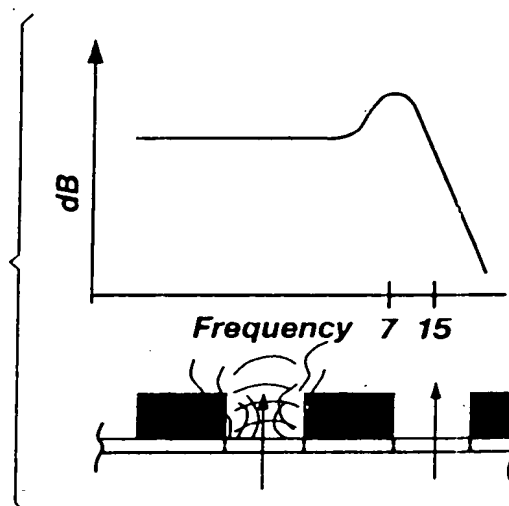


Fig. 29

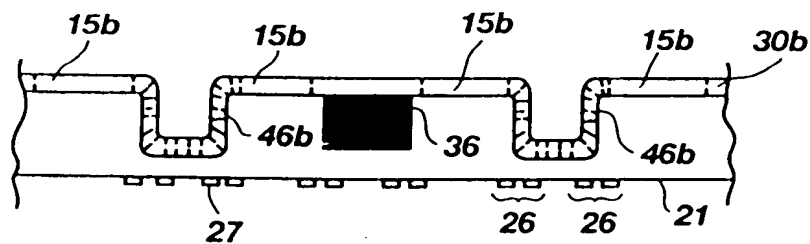


Fig. 32

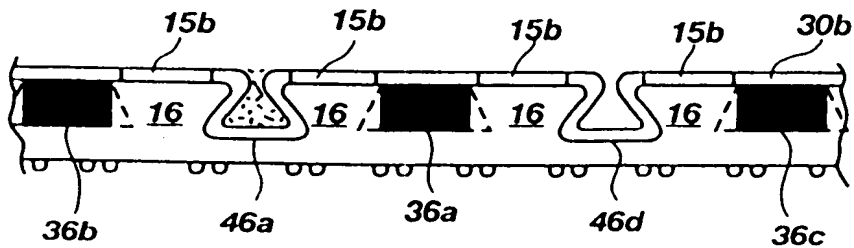


Fig. 33

This cross-sectional view shows a multi-layered structure. It consists of a top layer (21) and a bottom layer (27) separated by a central core (35). The top layer (21) contains conductive regions (36a, 36b, 36c) and is connected to a top terminal (30b). The bottom layer (27) contains conductive regions (35a, 35b, 35c) and is connected to a bottom terminal (30a). The core (35) has openings (45) that align with the conductive regions in the top and bottom layers. The openings in the core are filled with a material (46). The top and bottom layers are also connected to the terminals via conductive paths (45).

A cross-sectional view of a magnetic head assembly 27. The assembly includes a substrate 30a with a series of layers: 35c, 15a, 35a, 15a, 35b, 15a, and 35d. On top of these layers are four rectangular blocks with alternating magnetic polarity: S-N, N-S, S-N, and N-S. Above the substrate is a gap layer 36b, and above that is a thin layer 15b. A dashed line indicates the surface profile of the assembly.

A cross-sectional view of a magnetic head assembly 30a or b. The assembly includes a substrate 21 with a series of air-bearing surfaces 27. A magnetic layer 15 is formed on the substrate. A magnetic core 35 or 36c is positioned on the magnetic layer 15. The core 35 or 36c is divided into three sections, each labeled N (North) and S (South). The sections are separated by gaps. The top surface of the core 35 or 36c is labeled 35 or 36c. The bottom surface of the core 35 or 36c is labeled 35 or 36c. The side surfaces of the core 35 or 36c are labeled 35 or 36c. The top surface of the magnetic layer 15 is labeled 15. The bottom surface of the magnetic layer 15 is labeled 15. The side surfaces of the magnetic layer 15 are labeled 15. The top surface of the substrate 21 is labeled 21. The bottom surface of the substrate 21 is labeled 21. The side surfaces of the substrate 21 are labeled 21.